REMARKS / ARGUMENTS

In complete response to the outstanding Official Action of June 17, 2004, on the above-identified application, reconsideration is respectfully requested. Claims 1-10, 12-15, and 17-25 remain in this application. Claims 11 and 16 have been cancelled. Claim 18 is currently amended, as suggested by the Examiner, to better define the invention.

Allowable Subject Matter

Applicants gratefully acknowledge the indication that claims 18-25 are free of the prior art.

Claim Rejections Under 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1 and 15 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103 (a) as being obvious over Holl et al. '922, for reasons given in the last Office Action. Applicants respectfully maintain that the present invention is neither anticipated by, nor obvious over, Holl et al. '922.

The Examiner notes that the paragraph bridging columns 5 and 6 in Holl et al. '922 state that the desired resin regeneration in the bicarbonate form may be carried out without the exclusive use of carbon dioxide, albeit in the negative sense. Applicants respectfully argue that this is a particularly ambiguous passage, and must be very carefully analyzed.

This passage reads, in its entirety, as follows:

"This regeneration process will not occur in the absence of CO_2 by adding only $CaCO_3$. The exclusive use of CO_2, on the other hand, dissolved in water, lowers the pH to such an extent that the HCO_3^- concentration in water becomes extremely small. The curve **1** in **FIG. 1** shows that the

regenerating effect then becomes minimal." *Column 5, Line 65 through Column 6, Line 3.*

The first line is very clear, in the absence of CO_2, the regeneration process will not occur simply in the presence of $CaCO_3$. There is no confusion here, but this is not specifically at issue presently. However, it does set the tone of the entire paragraph. This paragraph is presented at the beginning of the detailed description section, in order to lay the groundwork for the invention that is disclosed and claimed in Holl et al. '922.

However, the next sentence must be taken in context. What is misleading, at least the Applicants, is the use of the phrase "on the other hand". Ordinary, this is used to indicate a contrast with the previous statement. In this case, it would *seem* to indicate that while it has been stated that using $CaCO_3$ in the absence of CO_2 *does not* work, "on the other hand" using CO_2 in the absence of $CaCO_3$ *does* work.

However, a close examination indicates that this is not what is actually disclosed in this sentence. The resulting pH of the CO_2 and water (carbonic acid) is very low. This indicates that there are relatively few hydrogen cations being formed. This, then, indicates that there will be very few bicarbonate anion being formed, as is stated in the last half of this second sentence.

The last sentence of this paragraph summarizes the situation that is present when CO_2 is used in the absence of $CaCO_3$. Here it is clearly stated that the regenerating effect becomes minimal.

This effect is explained in Holl et al. '922 as follows:

"This good efficiency is the result of the fact that HCO_3^- ions consumed by the regeneration are continuously replenished by the dissolution of corresponding quantities of solid $CaCO_3$.

Thus, during the regeneration process, one equivalent HCO_3^- is produced from the $CaCO_3$ per equivalent Cl^-, so that almost no drop in concentration of HCO_3^- ions occurs." *Column 6, Line 25 through Line 33.*

In a paragraph just below the one in question, it is noted that:

"In contrast, the combined use of an aqueous solution containing dissolved CO2 and solid calcium carbonate as proposed by the present invention, avoids the above-mentioned drawbacks and combines the advantages of the above described methods." *Column 6, Lines 13 through 17.*

Therefore, the paragraph at issue was obviously intended to identify drawbacks in the current state-of-the-art, and to be used to identify problems that the invention in Holl et al. '922 intended to overcome. Taken in this overall context, and after a close review of the paragraph itself, it is clear that it does not disclose that using CO_2 in the absence of $CaCO_3$ will successfully and efficiently regenerate resin in the bicarbonate form.

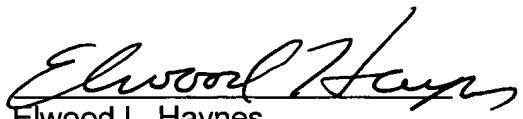
One of ordinary skill in the art would find that Holl et al. '922 neither suggests nor teaches the present invention.

Claims 2-10, 12-14, and 17 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Holl et al. '922, for reasons given in the last Office Action. Applicants respectfully maintain that the present invention is not unpatentable over Holl et al. '922. Since claims 1 and 15 are allowable over the prior art, for the above stated reasons, claims 2-10, 12-14, and 17 are also allowable since they are dependent upon them.

CONCLUSION

Accordingly, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the examiner believe a telephone call would expedite the prosecution of the application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,



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